

### **REMARKS/ARGUMENTS**

The Applicants originally submitted Claims 1-20 in the application. In the present response, the Applicants have not amended, added, or canceled any claims. Accordingly, Claims 1-20 are currently pending in the application.

#### **I. Rejection of Claims 1-20 under 35 U.S.C. §102**

The Examiner has rejected Claims 1-20 under 35 U.S.C. §102(e) as being anticipated by U.S. Publication No. 2003/0108117 to Ketchum, *et al.* The Applicants respectfully disagree since Ketchum does not select a constellation combination based on gains in channels of a MIMO transmitter as recited in independent Claims 1, 8, and 15.

Ketchum teaches that the response of the MIMO channel to be used is estimated and used to precondition the transmitted symbol vector prior to transmission to the receiver system. Channel impulse responses and signal-to-noise ratios (SNRs) for spatial sub-channels for the MIMO channel are derived by RX MIMO processor 160. Status of each received packet or frame can be provided by RX data processor 162 as well. Controller 170 then derives channel state information (CSI), which may comprise all or some of the information received from RX MIMO processor 160 and RX data processor 162. The CSI is transmitted back to transmitter system 110. At transmitter system 110, CSI transmitted by the receiver system is recovered and then provided to controller 130 which preconditions the transmitted symbol vector prior to transmission to the receiver system. (*See* paragraphs 29, 30, and 58 and Figures 1 and 2.) Thus, Ketchum teaches that channel state information (CSI) of the channels of a MIMO transmitter is derived at a receiver system and then

transmitted back to a transmitter system to be used to precondition a symbol vector prior to transmission.

Assuming *arguendo* the preconditioning of symbols to be transmitted with the CSI from a receiver in Ketchum is selecting a constellation combination as recited in independent Claims 1, 8, and 15; the selecting is based on the CSI from a receiver, not based on gains in MIMO transmitter channels as presently claimed. As such, Ketchum does not disclose each and every element independent Claims 1, 8, and 15 and, therefore, does not anticipate independent Claims 1, 8, and 15 and Claims that depend thereon. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102(e) rejection of Claims 1-20 and allow issuance thereof.

### **III. Conclusion**

In view of the foregoing remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-20.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 08-2395.

Respectfully submitted,

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